FILED
10/18/19
04:59 PM

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339.	R.19-09-009

GREEN POWER INSTITUTE OPENING COMMENTS ON ORDER INSTITUTING RULEMAKING

October 18, 2019

Gregory Morris, Director
Tam Hunt, Consulting Attorney
The Green Power Institute
a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
fax: (510) 644-1117
gmorris@emf.net
tam@communityrenewables.biz

GREEN POWER INSTITUTE OPENING COMMENTS ON ORDER INSTITUTING RULEMAKING

The Green Power Institute (GPI) respectfully submits these opening comments on the September 19, 2019 Order Instituting Rulemaking.

The Green Power Institute (GPI) is the renewable energy program of the Pacific Institute, a non-profit environmental and social advocacy group. Under the direction of Dr. Gregory Morris, the Green Power Institute performs research and provides advocacy on behalf of renewable energy systems and the contribution they make to reducing the environmental impacts of fossil-based energy systems. The Green Power Institute is located in Berkeley, California.

A summary of our comments follows:

- GPI is generally happy with the OIR's content but additional issues should be included in the final scoping memo, as described below
- Discussing issues that need to be coordinated with R.17-07-007, the Rule 21 reform proceeding, should be phased at the beginning of the present proceeding in order to avoid delaying implementation of SB 1339 beyond the statutory deadline. We suggest an increased and early focus on interconnection issues for microgrids because interconnection is a perennial hurdle for distributed energy resources (DERs) and we anticipate numerous interconnection issues for microgrids as they become more prevalent.
- Similarly, we suggest an early focus on coordination with the EV proceeding (currently R.18-12-006) due to the likely dramatic growth in EVs in the coming decades, and the need to ensure that microgrids are able to handle the large increase in load that will accompany such an increase in EV charging, and any related EV infrastructure issues that are implicated by the growth of microgrids
- GPI requests that the final scoping memo clarify what "rates and tariffs" policy

development consists of, and to separate these two issues as appropriate. "Rates" generally refers to the costs of power and demand charges, etc., paid to the utility by customers, while "tariffs" refers generally to the price paid to customers for power sent to the utility. The final scoping memo should define what rates and tariffs consist of in this context since these terms aren't defined in the legislation.

- Resiliency and self-sufficiency are a major feature of microgrids and we believe the final scoping memo should highlight these benefits, and also scope how such benefits can be monetized (coordinating with CAISO). The recent PG&E power outages, and the Commission's sanctioning of PG&E for its mishandling of these outages, constitute an interesting case study of how microgrids can help resolve ongoing operational issues suffered by the utilities.

I. Comments

a. Scoping

i. Some additional issues should be addressed

1. How to monetize resilience and reliability in an era of increasing wildfires and instability

PG&E's recent shut down of power to nearly 800,000 customers as a cautionary fire prevention measure in October, 2019 is a good example of how microgrids may add significant value to communities and individual customers. We note that the Commission recently sanctioned[1] PG&E for its mishandling of these planned power outages.

Microgrids can add substantial resiliency and reliability to the grid and to specific power consumers because they operate either in parallel with or independently of the utility power grid. These benefits can be worth substantial sums to some customers and to IOUs.

The Commission's 2014 report on microgrid opportunities and regulation ("Microgrids: A Regulatory Perspective," "Microgrid Report" from now on) states (p. 3):

[1] Online at : https://abc7news.com/society/cpuc-sanctions-pg-e-over-power-outages/5618811/

> [Microgrid C]ustomers are seeking out two primary services: reliability and resiliency. Considering the fragility of the existing grid, there is an increasing interest in driving certain resources further down into the distribution system - examples of this include efforts by the states of Connecticut, New Jersey, and New York to harden their grids in response to emergency events, such as an extreme weather event. Having sufficient resources, both at the utility-scale, but also at the local level are becoming increasingly important to manage the variety of challenges facing today's electric utilities.
>
> Additionally, many customers are seeing the potential benefits of investing in their own technologies to both ensure their own level of reliability, but also to better manage their own usage.

The same report generalizes the possible services that microgrids can provide the macrogrid system operator (p. 10):

- A reliable, dispatchable energy resource;
- An ancillary service resource;
- A load shed resource; and/or,
- A consumption resource (to handle over generation)

> To the extent that a microgrid, or the business entity representing the microgrid, can participate in wholesale markets, revenue streams can be associated with these bulk electric system (BES) needs. … From a management standpoint, customer-side resources today are not usually visible to either the ISO or to the DSO. Microgrids change that equation to the degree that they participate in wholesale markets as described above, or provide EPS services (such as volt/VAR control) to the DSO.

As resiliency and reliability from microgrids become monetized, the avoided costs of these benefits must be closely examined beyond the cost to IOUs of allowing microgrid development. The costs to PG&E of shutting off power for hundreds of thousands of customers, for example, pales in comparison to the actual costs to businesses, schools, and residents who lost power and were unable to operate for those days. The lost costs of business for those without power must be accounted for in discussions surrounding resiliency and monetization.

These issues should be examined thoroughly in the present proceeding, and coordinated with

CAISO and other agencies as required.

2. Plan for various use cases, including multiple user microgrids.

a. Legal mechanism for a MUM to deliver/sell electricity to various customers while not being an IOU?

Multi-user microgrids ("MUMs") allow neighboring customers to obtain the benefits of microgrids, including electric resiliency and reliability. While currently there are relatively few in operation, MUMs are an emerging use case, particularly as costs decrease for these technologies, and electric services become more susceptible to interruptions.

Since more microgrids across the state will likely lead to more DER and more grid resiliency, the Commission should encourage a wide array of use cases, including those that may be still emerging, such as MUMs.

3. How will CPUC handle the need for microgrid wires to potentially cross public rights of way?

GPI suggests that the Commission scope an examination of public rights of way in relation to microgrids, since at least some microgrids will cross public rights of way, streets, and other public infrastructure. This presents a different set of legal issues for privately-owned microgrids compared to utility-owned microgrids.

4. "Rates and tariffs" should be separated and further defined

The PSM scopes the following item:

> Develop separate rates and tariffs, that are just and reasonable, to support microgrids, pursuant to Section 8371(d).
>
> ii. Ensure that the separate rates and tariffs shall not compensate a customer for the use of diesel backup or natural gas generation, except as either of those sources is used pursuant to Section 41514.1 of the Health and Safety Code, or except for natural gas

generation that is a distributed energy resource, pursuant to Section 8371(d).

iii. Ensure that the development of microgrids ensures system, public, and worker safety, pursuant to Section 8371(d).

GPI supports scoping this item as it is good policy and also required by SB 1339. GPI also requests that the final scoping memo define "rates and tariffs" (these terms aren't defined in the legislation), specifically what will be involved in policy development with respect to rates and tariffs, and to separate these two issues as appropriate. "Rates" generally refers to the costs of power and demand charges, etc., paid to the utility by customers, while "tariffs" refers generally to the price paid to customers for power and/or ancillary services provided to the utility.

iv. Issues in other proceedings previously addressed or underway that require coordination with this proceeding

1. The microgrid proceeding should be coordinated with the ongoing Rule 21 proceeding (R.17-07-007) and phased early on in the present proceeding

As with other DER, interconnection will play a major role in the success or failure of microgrids. The PSM scopes the following:

> Develop guidelines to determine what impact studies are necessary for microgrids to connect to the electrical corporation grid, pursuant to Section 8371(c).

GPI supports this issue being scoped in the present proceeding with a deadline for resolution, as it is specifically required by SB 1339. We also urge that the present proceeding coordinate with R.17-07-007 since that proceeding is tasked with ongoing Rule 21 reform efforts. R.17-07-007 is behind schedule already, and many additional issues still need to be resolved in that proceeding and are scheduled for resolution in the upcoming Working Group 4 (GPI has been deeply involved in R.17-07-007 since its inception), so it will not be an easy task to coordinate with the present proceeding on additional significant

issues related to microgrids. While it won't be easy, it will still be highly desirable.

GPI anticipates that interconnection procedures for standalone energy storage facilities may be readily modified for advanced microgrid interconnection requests, since microgrids can both consume and produce power (like battery storage) at different times, and these attributes need to be managed by the macrogrid operator, and potentially monetized through Commission and CAISO policies.

With the legislative deadlines included in SB 1339, the Commission should "cue up" coordination with R.17-07-007 early in the present proceeding. GPI will raise this issue at the upcoming prehearing conference to ensure that it is heard early in the development of this proceeding.

2. Microgrid issues should also be coordinated with R.18-12-006 to Continue the Development of Rates and Infrastructure for Vehicle Electrification

Similarly, ongoing EV policy issues are being resolved in R.18-12-006 and related utility applications. Most microgrids will include some EV charging and related infrastructure and these features of microgrids may involve policy issues being resolved in R.18-12-006. EVs may also play a role in energy storage on the microgrid. We suggest that the Commission also cue up discussion of possible R.18-12-006 implications early in the present proceeding in order to ensure that these interrelationships don't slow implementation of SB 1339 beyond the legislative deadline.

II. Conclusion

GPI urges the Commission to adopt the recommendations discussed above.

Dated: October 18, 2019, at Berkeley, California.

Respectfully Submitted,

Gregory Morris, Director
Tam Hunt, Consulting Attorney
The Green Power Institute
a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
fax: (510) 644-1117
gmorris@emf.net